

DRAFT

August A. Busch Memorial Conservation Area

Ten-Year Area Management Plan

FY 2016-2025



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OVERVIEW

- **Official Area Name:** August A. Busch Memorial Conservation Area, # 4901
- **Year of Initial Acquisition:** 1947
- **Acreage:** 6,987 acres
- **County:** St. Charles
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**

A. Strategic Direction

The primary purpose of the August A. Busch Memorial Conservation Area (Busch Memorial CA) is to provide grassland, cropland, woodland and edge habitat that will protect wildlife resources, improve water quality of the area lakes and streams, and promote outdoor recreation.

B. Desired Future Condition

The desired future condition of Busch Memorial CA is a mix of grassland, cropland, woodland and edge habitat surrounding multiple lakes, ponds and wetlands.

C. Federal Aid Statement

This area, or a portion thereof, was developed with Land and Water Conservation Fund dollars to provide land or facilities for public outdoor recreation.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

A. Priority Areas: The area is part of Audubon Missouri's Busch/Weldon/Howell Conservation Area Complex Important Bird Area.

B. Natural Areas: None

C. Other: Busch Memorial CA is a natural resource island within Metropolitan St. Louis (population of 2.8 million people). The area is one of the most visited conservation areas in the state and supports a variety of public uses. It has been estimated that Busch Memorial CA annually hosts over a quarter million visitors, with angling accounting for about half of all visits and over 63 percent of all use hours.

II. Important Natural Features and Resources

A. Species of Conservation Concern: Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

B. Caves: None

- C. Springs:** Yes, records kept with Missouri Department of Conservation (the Department) Natural History Biologist.
- D. Other:** The Busch Memorial CA is part of the St. Charles County Prairie/Woodland Low Hills landtype association. This landtype is the major component of the area and consists of broad loess-covered hills in the north, which becomes more steep-sided in the south, nearer the Missouri River. Local relief in the north is closer to 100 feet, but rises to nearly 200 feet closer to the Missouri River. Natural and human-induced erosion has deposited loess in the stream valleys. Historically, prairie dominated the uplands and graded into oak savanna and woodland in the valleys. Mixed-hardwood forests occupied the deepest valleys. Today the region is largely urbanized by growth of the St. Louis Metropolitan Area. Non-urbanized lands are largely pasture with occasional cropland. Small isolated stands of second-growth timber are common in rougher lands (Nigh & Schroeder, 2002).

III. Existing Infrastructure

Buildings:

- St. Louis Regional Office
- Main office shop compound
- Chemical storage building
- Stable/field trial barn
- Shooting range office/shop building*
- Shooting range storage buildings (3)*
- Trap houses (3), skeet houses (2), 19-point covered firing range with storage rooms*
- Shooting range observation booth*
- 14-position static archery range with elevated platform (Americans with Disabilities Act (ADA) accessible)
- 2 14-target walk-through archery trails
- Pavilion at archery range (ADA accessible)
- 13 privies (12 cinderblock style, 1 pre-cast); (ADA accessible at Lakes 2, 6, 15, 33 and 34; shooting range; and main office)
- Pavilion and picnic area at main office complex

*The shooting range is currently under renovation and the existing infrastructure will be removed and replaced.

Amenities:

- 95 boats for seasonal rent from local concessionaire

- 4 fishing docks at Lakes 33, 34 (ADA accessible)
- 43 fishing jetties/platforms
- 47 parking lots (ADA accessible concrete pads at Lakes 6, 15, 33 and 34; shooting range; refuge lake; pavilion and main office)
- 15 picnic tables (ADA accessible tables at Lakes 15 and 2, and pavilion)
- 5 viewing blinds (ADA accessible at Refuge Lake and Fallen Oak Trail)

Historic Features:

- 100 storage bunkers from early 1940s as part of the Weldon Spring Ordnance Works, a U.S. Government-owned, contractor-operated facility
- See Appendix for more history

Roads:

- Public/open area roads (1.1 mi. asphalt, 23.4 mi. gravel)
- Service/closed area roads (21.1 mi. gravel)

Trails:

- Fallen Oak Nature Trail (0.7 mi., asphalt surface, hiking only)
- Dardenne Creek Trail (0.4 mi., natural surface, hiking only)
- Pine Trail (0.2 mi., natural surface, hiking only)
- Woodland Trail (0.2 mi., natural surface, hiking only)
- Wildlife Management Trail (0.4 mi., gravel and natural surface, hiking only)
- Prairie Trail (0.2 mi., natural surface, hiking only)
- Busch Hiking and Biking Trail (3.2 mi., gravel surface, hiking and biking)
- Hamburg Trail (1.7 mi., gravel and asphalt surface, hiking and biking)

Lakes:

- 32 man-made lakes with dam and emergency spillways; Lakes 1, 2 and 15 closed to public fishing as part of the Aquatic Resource Education Program; Ahden Knight Hampton Lake and Lake 8 also closed to fishing
- 12 walk-in fishing ponds

Wetlands:

- 2 wetland impoundments (east of Lake 33, flooded via an underground piping system from Lake 33); water control structures
- 2 wetland impoundments (along Dardenne Creek/northeast corner of area); spring-fed; stoplog water control structures

III. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** Department of Natural Resources groundwater use restrictions (Figure 3)
- B. Federal Interest:** This land must provide land/facilities for public outdoor recreation in perpetuity. Federal funds may also be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. Easements:**
- Duckett Creek Sanitary District holds three easements for ingress/egress, utilities and a lift station.
 - Cuivre River Electric Cooperative holds two electric utility easements.
 - St. Charles County Public Water Supply District #2 holds three water transmission main easements.
 - Missouri Highways and Transportation Commission hold four easements for highway and utility purposes.
 - St. Charles County holds one easement for an emergency warning siren.
 - Dardenne Presbyterian Church holds one road easement.
 - AT&T holds one easement for a fiber optic cable at the Shooting Range.
- D. Cultural Resources Findings:** Yes, records kept with the Department Environmental Compliance Specialist. Managers should follow Best Management Practices for Cultural Resources found in the Department Resource Policy Manual.
- E. Hazards and Hazardous Materials:** Contamination of soil and water as a result of previous activities by the Department of Energy and Department of Army. The affected portions were all part of a federal environmental cleanup project and were required to meet certain environmental health and safety standards. The area is now considered to be safe for all recreational pursuits currently allowed on the area, as well as the wildlife found within the area.
- F. Endangered Species:** Endangered Species are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.
- G. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property.

MANAGEMENT CONSIDERATIONS

IV. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Control invasive plant species impacts (e.g., bush honeysuckle, Japanese honeysuckle, garlic mustard, fescue and *Sericea lespedeza*).
- 2) Re-introduce fire into natural communities.
- 3) Manage woodlands to benefit understory herbaceous vegetation.
- 4) Expand the restored prairie/grassland complex and maintain adequate plant diversity in prairie stands.
- 5) Manage the Agricultural Crop Program/open field management and monitor permittee interest.
- 6) Demonstrate to the public the benefits of important habitat management practices (e.g., invasive species control, open field management, prescribed fire, woodland thinning, quail habitat demonstrations, etc.).

Management Objective 1: Maintain high quality natural communities.

Strategy 1: Reduce invasive plant species (e.g., bush honeysuckle, Japanese honeysuckle, garlic mustard, fescue, *Sericea lespedeza*) to levels that will have negligible impact to natural communities. Work to keep invasive plants from invading new areas. Extensive control and follow-up treatment are needed on substantial acreage. This work will be completed using a combination of Department staff, volunteers and contractors. Aerial spraying and other methods will be used as a means to control bush honeysuckle more efficiently. (Wildlife)

Strategy 2: Utilize prescribed fire and other methods to manage herbaceous vegetation in prairies and woodlands, to increase oak regeneration in woodlands, and to control bush honeysuckle and other invasive plants. Area burn plans may be written to include larger burn units that contain multiple habitat types. In addition, burn units will be designed to include areas where bush honeysuckle populations are young or have been previously treated to help prevent re-establishment. (Wildlife)

Management Objective 2: Manage open land resources through the Agricultural Crop Program. If no permittee farmers participate in the program, implement other management techniques to control invasive plants in open fields and provide wildlife food resources.

Strategy 1: Utilize the Agricultural Crop Program to contract with permittee farmers to establish up to 700 acres of row crops annually. Agricultural contracts

will require a sustainable crop rotation system to control invasive plants and provide wildlife food sources. (Wildlife)

Strategy 2: In the event that permittee farming is no longer a technique to maintain open land, manage open lands with a variety of management techniques to provide a diverse array of habitat types consisting of food plots, old fields, reforested areas and early successional weedy fields. (Wildlife)

Management Objective 3: Expand restored prairie/grassland complex located in the south-central part of the area to approximately 300 total acres. Maintain adequate plant diversity in prairie stands.

Strategy 1: Remove agricultural crops from 10 to 20 acres of open land adjacent to the existing grassland complex. Establish prairie grasses and forbs in the area. (Wildlife)

Strategy 2: Remove or thin tree rows between prairie fields to allow establishment of sufficient herbaceous vegetation to allow prescribed fire to help control woody plants. (Wildlife)

Strategy 3: Periodically evaluate restored prairie fields for forb diversity and quantity. If warm-season grasses begin to dominate fields, suppress the grasses through techniques such as disking, herbicide or prescribed fire; and add forb seed to the field. (Wildlife)

Management Objective 4: Provide sites to demonstrate prairie and woodland management and invasive species control. Provide interpretation that exhibits the benefits of proactive management activities to the public.

Strategy 1: Strategically locate some of the projects described in Terrestrial Management Objective 1, Strategies 1 and 2 into areas that are visible to the public, with good opportunities for interpretation (e.g., signage, programs, etc.). (Wildlife)

Management Objective 5: Manage existing woodlands to increase the number and diversity of native herbaceous and woody species.

Strategy 1: Manage woody and herbaceous invasive species (such as bush honeysuckle, multi-flora rose, garlic mustard, etc.) through the use of herbicides, prescribed fire and other methods. (Wildlife)

Strategy 2: Conduct woodland/forest thinning activities to increase mast production and native species diversity. This work is to be conducted after successful management of the larger woody invasive species. (Wildlife)

V. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) Maintain adequate fish habitats for healthy sustainable fish populations.
- 2) Portions of streams within Busch Memorial CA have narrow riparian forest buffers.
- 3) Manage wetland pools with water level manipulations and soil disturbance to provide habitat for water birds.
- 4) Some lake dams and wetland levees are too steep to be safely maintained or suffer from erosion or muskrat damage.
- 5) Siltation in some lake emergency spillways has increased lake water levels creating dam safety concerns.
- 6) Some lakes suffer from siltation and have become shallow.
- 7) Future development of neighboring grounds will further increase quantity of stormwater and silt inputs to area lakes and streams.
- 8) The Lake 8 basin has a chronic leak, which reduces fishery management abilities and has been designated a dog training lake.
- 9) Hampton (Refuge) Lake has become shallow and overgrown with vegetation, limiting its use. It could be renovated for Aquatic Resource Education, special events (Wetland for Kids) and naturalist programming use.
- 10) Explore potential for additional wetland habitat.
- 11) Explore opportunities to construct larger lake sites.

Management Objective 1: Manage wetland pools with water level manipulations and soil disturbance to provide habitat for waterbirds.

Strategy 1: Manipulate water levels in the wetland pools through use of the water control structures to provide shallow flooded habitat during fall and spring waterbird migration. (Wildlife)

Strategy 2: Use soil disturbance to control invasive plants and to stimulate beneficial moist soil plants as a food source for migratory waterbirds. (Wildlife)

Management Objective 2: Expand wetland acreage on the Busch Memorial CA.

Strategy 1: Explore the feasibility of utilizing material from current oversized levees at the Lake 33 wetland complex to construct low profile levees south of the existing wetland complex. Install water control structures to allow for water level manipulation. (Design and Development, Wildlife)

Strategy 2: Explore options to pro-actively manage stormwater and other water inputs from neighboring lands along northern and western boundaries through construction of fishless, detention/retention basins or opportunistic wetlands. (Wildlife, Fisheries)

Strategy 3: Explore options for wetland attributes during the potential conversion of Lake 8 to dog training facility. (Wildlife)

Strategy 4: Explore options for opportunistic wetlands around Kraut Run and north of Dardenne Creek. (Wildlife)

Management Objective 3: Establish, maintain or expand lake and stream habitats.

Strategy 1: Develop lake basin renovation projects for lakes suffering from excessive siltation (Appendix A). (Fisheries)

Strategy 2: When renovating lakes, build a variety of depths, deep channels, spawning structures, rock piles and shoreline diversity. Armor dam faces with rock rip-rap. (Fisheries)

Strategy 3: Install and/or maintain brush piles, hinged shoreline trees, and wooden pallet structures in lakes managed for multiple fish species. (Fisheries)

Strategy 4: Establish and maintain appropriate native aquatic vegetation in lakes. (Fisheries)

Strategy 5: Conduct lake site search and explore opportunities to construct larger (>20 acres) lakes on appropriate sites. (Fisheries)

Strategy 6: Explore options to provide hypolimnetic aeration to at least two lakes to improve oxygen levels for cool/cold water species. (Fisheries)

Strategy 7: Survey depths of up to 12 walk-in ponds to determine need for renovation. Develop renovation projects, as needed. (Fisheries)

Strategy 8: Conserve, expand or establish riparian forest buffers to a minimum of 100-foot wide, on both sides of Busch Memorial CA area streams, according to Department riparian guidelines (Missouri Department of Conservation, 2009). (Wildlife)

Management Objective 4: Improve lake embankments and spillways.

Strategy 1: Improve dam maintenance safety by decreasing backside slopes to a minimum 3:1 ratio at four lakes (Appendix A). (Fisheries)

Strategy 2: Improve protection of dam faces, and decrease shoreline and bank erosion by developing stabilization projects including armoring with rock to eliminate damage from wind/waves and burrowing animals at up to nine lakes (Appendix A). (Fisheries)

Strategy 3: Renovate primary and emergency spillway elevations to improve drainage on up to nine lakes (Appendix A). (Fisheries)

VI. Public Use Management Considerations

Challenges and Opportunities:

- 1) Busch Memorial CA is one of the most heavily-used conservation areas in Missouri.
- 2) Educate diverse users about area use regulations related to hunting, trapping, fishing and other recreational activities.
- 3) Provide a diverse array of hunting, trapping and fishing opportunities for a wide variety of species on a high public use area.
- 4) Manage multiple public user group activities to avoid conflicts between groups.
- 5) The area includes considerable infrastructure (lakes, roads, trails, etc.), which require significant maintenance.
- 6) Aquatic Resource Education use by schools is heavy and increasing.
- 7) The concessionaire and rental boat programs are popular with anglers.
- 8) Conduct a visitor use survey in partnership, with Policy Coordination, Outreach and Education and Resource Science Divisions, to better understand and meet intense and increasing demand for public use.
- 9) The Busch Memorial CA has been identified as a crucial component of the Great Rivers Greenway trail program, which could potentially link several greenways in St. Charles and St. Louis counties.
- 10) Determine the feasibility of developing an educational outdoor campus through renovation of the Hampton Lake area and connection to the St. Louis Regional Office complex and the Lake 1, 2, 15 Aquatic Resource Education complex.
- 11) Several lakes could provide more grounds maintenance for families that desire more park-like angling experiences.
- 12) Disabled angler access could be improved.
- 13) Provide dog training opportunities while maintaining fish and wildlife habitat.
- 14) Current firearms range is undergoing renovation to update the facility, minimize lead contamination and enlarge the range (i.e., to handle increased use).
- 15) Maintain communication with internal and external stakeholders on the range construction progress.
- 16) Continue to provide hunting/shooting programs to the public.
- 17) Recently renovated unstaffed archery range includes static range, ADA-accessible shooting platform and two 14-target walk-through archery trails.

Management Objective 1: Educate area users through a variety of media (e.g., area brochures, Department website, area signage) about area regulations to reduce Wildlife Code violations and enhance enjoyment of area resources.

Strategy 1: Maintain area signage (boundary, fishing regulation, service road, etc.) to inform the public and reduce violations. (Wildlife)

Strategy 2: Explore options to install interpretive signage to inform area users about habitat management practices and techniques. (Wildlife)

Management Objective 2: Provide sustainable hunting opportunities for a wide variety of species on a high public use area.

Strategy 1: Conduct managed hunts for deer, turkey and waterfowl to control hunting pressure. (Wildlife)

Strategy 2: In the future, should beagle field trials no longer take place on the area, consider removing the Special Rabbit Management Zone to increase rabbit hunting opportunities for the general public. (Wildlife)

Management Objective 3: Maintain healthy deer populations to provide ample hunting opportunities.

Strategy 1: Conduct spotlight deer surveys and aerial surveys of deer population on the area to periodically assess density. (Wildlife)

Strategy 2: Conduct a variety of managed hunts to help manage deer numbers and provide several options for hunters to enjoy the resource. (Wildlife)

Management Objective 4: Manage large user groups or user groups with special requirements through the Special Use Permit program to help avoid conflicts between groups.

Strategy 1: Utilize Special Use Permits to schedule field trial and hunt test activities to ensure adequate sharing of the resource. (Wildlife)

Strategy 2: Follow Department Special Use Permit guidance when evaluating Special Use Permit applications to determine if activities can be allowed or not. (Wildlife)

Strategy 3: Maintain Lakes 1, 2, 12 and 15 as Aquatic Resource Education lakes. Do not permit dog training and field trials on these lakes. (Fisheries, Wildlife)

Strategy 4: Maintain Lake 8 as a designated dog training lake closed to fishing. Dog training and field trials will be permitted on all other Busch Memorial CA lakes, except for lakes hosting winter trout (November through March at Lakes 3, 21, 22, 23 and 28), intensive channel catfish (April through September at Lakes 3, 4, 5, 7 and 23) stockings, and Ahden Knight Hampton Lake. Additionally, dog training and field trials on all newly constructed and renovated lakes will be evaluated based on future management of the lake. (Wildlife)

Strategy 5: Maintain existing private concessionaire program. (Fisheries)

Strategy 6: Maintain existing rental boat program to be operated by concessionaire. (Wildlife)

Strategy 7: Explore opportunity to simplify use of Aquatic Resource Education lakes, e.g., Lakes 1, 2, 12, 15 and Hampton (Refuge) Lake; if renovated, replace

need for Special Use Permits with existing lake reservation system guideline forms. (Fisheries)

Management Objective 5: Maintain restrooms, buildings, roads, mowed areas, trails, and other developed areas in a manner that promotes the aesthetics and utility of these resources.

Strategy 1: Utilize contractors, when appropriate, to perform routine trash pickup, cleaning, mowing and other activities that maintain the aesthetics and utility of area amenities. (Wildlife)

Strategy 2: Ensure area signage is maintained on a continual basis to assist the public with navigating the area road network and other features. (Wildlife)

Strategy 3: Manage grounds surrounding up to 13 lakes through increased mowing frequency, reduced shoreline brush, improved tree shade quality, and improved access for Aquatic Resource Education programming and enhanced family fishing opportunities. (Wildlife)

Strategy 4: Consider developing project proposals to improve disabled angler access at up to six lakes. (Fisheries)

Strategy 5: Consider clearing shorelines and increase mowing frequency at up to 12 walk-in fishing ponds. (Fisheries)

Management Objective 6: Provide high-quality fishing opportunities for a wide variety of fish species.

Strategy 1: Maintain multi-species fish communities in at least 25 lakes (Figure 4). (Fisheries)

Strategy 2: Maintain year-round catch-and-release fishing opportunities on at least three lakes (Appendix A). (Fisheries)

Strategy 3: Investigate possibilities of reducing the number of lakes intensively stocked (at least 400 fish per acre per year) with channel catfish. (Fisheries)

Strategy 4: Maintain channel catfish opportunities at up to 26 lakes through annual stockings of at least 30 fish per acre per year. (Appendix A). (Fisheries)

Strategy 5: Maintain special winter trout opportunities through stocking program at two lakes using catch-and-release regulations with annual stocking rates of 400 fish per acre per year and up to three lakes using statewide harvest regulations with annual stocking rate of 700 fish per acre per year (Appendix A). (Fisheries)

Strategy 6: Provide high-quality largemouth bass fishing in up to 15 fishing lakes (Appendix A). (Fisheries)

Strategy 7: Provide high-quality panfish (bluegill, crappie and/or redear sunfish) fishing in up to 12 fishing lakes (Appendix A). (Fisheries)

Strategy 8: Increase or maintain diversity of specialty sportfish species through special management in at least eight lakes for muskie, hybrid striped bass, trout and flathead catfish (Appendix A). (Fisheries)

Strategy 9: Explore the possibility of creating temporary special angling regulations to reduce overcrowded largemouth bass populations. (Fisheries)

Strategy 10: Survey and evaluate fish communities, in up to 12 walk-in fishing ponds and Dardenne Creek within the Busch Memorial CA, to determine best management options. (Fisheries)

Management Objective 7: Provide exceptional regional Aquatic Resource Education and angler recruitment opportunities.

Strategy 1: Design and construct a Capital Improvement project to upgrade restroom, shelter, access, parking, lake shoreline, trail, wetland, fishless pond and ADA facilities surrounding Lakes 1, 2 and 15. (Fisheries)

Strategy 2: Explore the possibility of renovating and adapting Hampton (Refuge) Lake for increasing Aquatic Resource Education, naturalist programming and special event use. Connect this area to Regional Office and Lakes 1, 2 and 15 with trails. (Outreach and Education)

Strategy 3: Utilize Aquatic Resource Education facilities in Department angler recruitment programming. (Fisheries)

Strategy 4: Maintain Lake 12 as “kids only” and Aquatic Resource Education lake. (Fisheries)

Management Objective 8: Provide dog training opportunities while maintaining fish and wildlife habitat.

Strategy 1: When performing lake renovations, look for ways to incorporate features that will enhance dog training opportunities, when appropriate, based on management objectives. (Fisheries)

Strategy 2: When performing wildlife habitat management in known training and field trial areas, visit with local dog trial clubs to discuss management objectives and potential impacts to dog training and field trial use. (Wildlife)

Strategy 3: Continue to keep the Special Rabbit Management Zone posted with no hunting signs to close the area to rabbit hunting, except for youth hunters, which should result in higher rabbit populations to support beagle field trials. (Wildlife)

Management Objective 9: Conduct a public use survey to better understand and meet the intense and increasing demand for public use.

Strategy 1: Work with Policy Coordination, Outreach and Education, and Resource Science Divisions to develop and implement a public use survey by FY2020. (Wildlife, Fisheries, Outreach and Education)

Management Objective 10: Renovate existing shooting range.

Strategy 1: The facility closed Jan. 1, 2015, for a period of 24 to 30 months. This will include a two-phase process: Phase I is demolition of the current facility and lead reclamation. Phase II is construction of the new range, which will include the following:

- 100-yard range with 20 firing points and 50-yard range with 15 firing points including baffling and ADA accessibility.
- Education building for the purpose of conducting firearms and hunting programs.
- Static line archery range with one shooting tower and two broadhead pits that are ADA accessible.
- Two shotgun patterning ranges with capability to pattern up to 40 yards.
- Five combination trap/skeet ranges, including two with five-stand capability, and meeting Amateur Trapshooting Association and National Skeet Shooting Association standards. (Outreach and Education)

Management Objective 11: Maintain communication with internal and external stakeholders regarding the shooting range renovation.

Strategy 1: Utilize the Department website and on-site construction cameras to allow the public to follow the progress of construction. (Outreach and Education)

Strategy 2: Utilize a Department blog for public questions and comments concerning the renovation. (Outreach and Education)

Strategy 3: Provide quarterly updates on the progress of construction through email, the Conservation Connections and the Department website. (Outreach and Education)

Management Objective 12: Continue to provide hunting/shooting programs to the public.

Strategy 1: During construction, utilize classroom facilities at the St. Louis Regional Office and at Henges Shooting Range and Outdoor Education Center to conduct hunting and shooting programs and Hunter Education classes. (Outreach and Education)

Strategy 2: After construction is completed, explore ways to use the new facility to increase the amount and types of shooting and hunting programs that are offered. Use these programs as a recruitment tool for new hunters and shooters. (Outreach and Education)

Management Objective 13: After construction is completed, maintain the on-site archery range and the unstaffed archery range at Busch Memorial CA according to Shooting Range Facilities Program Manual guidelines.

Strategy 1: Perform weekly maintenance to ensure target butts are operational and paper targets are replaced. (Outreach and Education)

Strategy 2: Weekly monitor routine maintenance needs (mowing, litter control and privy cleaning). Utilize contractors, when appropriate, to perform maintenance tasks. (Outreach and Education)

Strategy 3: Mow and inspect the archery range boundary for repairs yearly and replace signage as necessary. (Outreach and Education, Wildlife)

VII. Administrative Considerations

Challenges and Opportunities:

- 1) Encroachment by neighboring homeowners, leading to tree cutting, yard waste dumping and other activities along property boundaries.
- 2) Explore feasibility for modern restroom facilities strategically located through the area and eliminate pit-style restroom facilities.

Management Objective 1: Maintain well marked, accurate boundary lines.

Strategy 1: Maintain signage along boundary lines every five years. (Wildlife)

Strategy 2: Work with neighboring homeowners to provide education about area regulations and request compliance. (Wildlife, Protection)

Strategy 3: Obtain administrative guidance on resolving minor boundary issues. (Wildlife)

Management Objective 2: Replace existing pit privies with fewer and more modern, low maintenance restroom facilities.

Strategy 1: Investigate feasibility of removing existing pit privies and replacing with up to six modern restroom facilities during budgeting process. (Wildlife, Design and Development)

Strategy 2: Investigate opportunities to use solar-powered restrooms with access to water. (Wildlife, Design and Development)

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Aquatic Resource Management										
<i>Objective 3</i>										
Strategy 5							X	X		
Strategy 8		X	X							
<i>Objective 4</i>										
Strategy 1		X	X	X	X	X				
Strategy 2		X	X	X	X	X				
Strategy 3		X	X	X	X	X				
Public Use Management										
<i>Objective 6</i>										
Strategy 3	X	X	X							
<i>Objective 7</i>										
Strategy 1		X	X	X						
<i>Objective 9</i>										
Strategy 1					X					
<i>Objective 10</i>										
Strategy 1	X	X	X							
<i>Objective 12</i>										
Strategy 1	X	X	X							
Administrative Considerations										
<i>Objective 1</i>										
Strategy 1		X					X			

APPENDICES

Area Background:

The August A. Busch Memorial Conservation Area was purchased by the Missouri Department of Conservation in 1947 from the federal government. Mrs. August A. Busch, Sr. donated a portion (\$70,000) of the cost toward the purchase of the area as a memorial to her late husband.

In the early 1940s, the area was used by the U. S. Army as a TNT munitions plant to support the World War II effort. There are still 100 of the old TNT storage bunkers that exist on the area.

The Department encourages recreational use of the area by the public, while furnishing fish and wildlife with the resources necessary to be healthy and abundant. We encourage the public to walk the hiking trails, drive the auto tour, photograph the wildlife or simply sit under a tree and enjoy the sights and sounds of the outdoors.

Hunting for a variety of wildlife species is allowed on the area. Special regulations exist for most of the hunting activities. Check the Area Regulations section or the area office for current regulations.

Portions of the Busch Memorial CA were used by the U. S. Department of Army in the 1940s for TNT and DNT production and by the Atomic Energy Commission in the 1960s for uranium ore processing. The affected portions were part of a federal environmental cleanup project and were required to meet environmental health and safety standards. The area is now considered to be safe for all recreational pursuits allowed on the area, as well as the wildlife found within the area. To find out more about the history of these activities on the area, you can visit the Weldon Spring Site Interpretive Center located at 7295 Highway 94 South, St. Charles, Missouri.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Woodland	4,400		63
Cropland/Hay Land	967		14
Old Fields/Upland Fields	530		8
Impounded Water	470		7
Warm Season Grass Fields	290		4
Bottomland/Riparian Forest	240		3
Wetland	90		1
Total	6,987		100
Stream Frontage		4.7	

Public Input Summary:

Prior to writing this draft area management plan, the Department conducted a public input process (the August A. Busch Memorial Conservation Area Idea Gathering Stage) from Oct. 1-31, 2014. The objective of this phase was to inform stakeholders about the area planning process and ask them to share their ideas. The public was notified through a Busch Conservation Area Open House (held Oct. 14, 2014); brochures and comment stations at the conservation area; the Department's website; local newspapers and newsletters; emails sent to the Area Plan email list (2,800 people); and emails sent to neighboring landowners, non-governmental organizations and local government offices. The Department received input from 22 respondents (see "August A. Busch Memorial Conservation Area Idea Gathering Stage Public Input Summary" at mdc.mo.gov/areaplans).

The area management planning team took comments into consideration as they drafted this 10-year management plan. A brief summary of public input themes, including how they will be incorporated or why they will not be included, can be found in Appendix B.

References:

- Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and water managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.
- Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Missouri: Missouri Department of Conservation.

Maps:

- Figure 1: Area Map
- Figure 2: Aerial Map
- Figure 3: Department of Natural Resources Drilling Restrictions

Additional Appendices:

- Appendix A: Busch Memorial CA Lakes and Ponds
- Appendix B: Department Responses to Public Comments – August A. Busch Conservation Area Idea Gathering Stage

Figure 1: Area Map

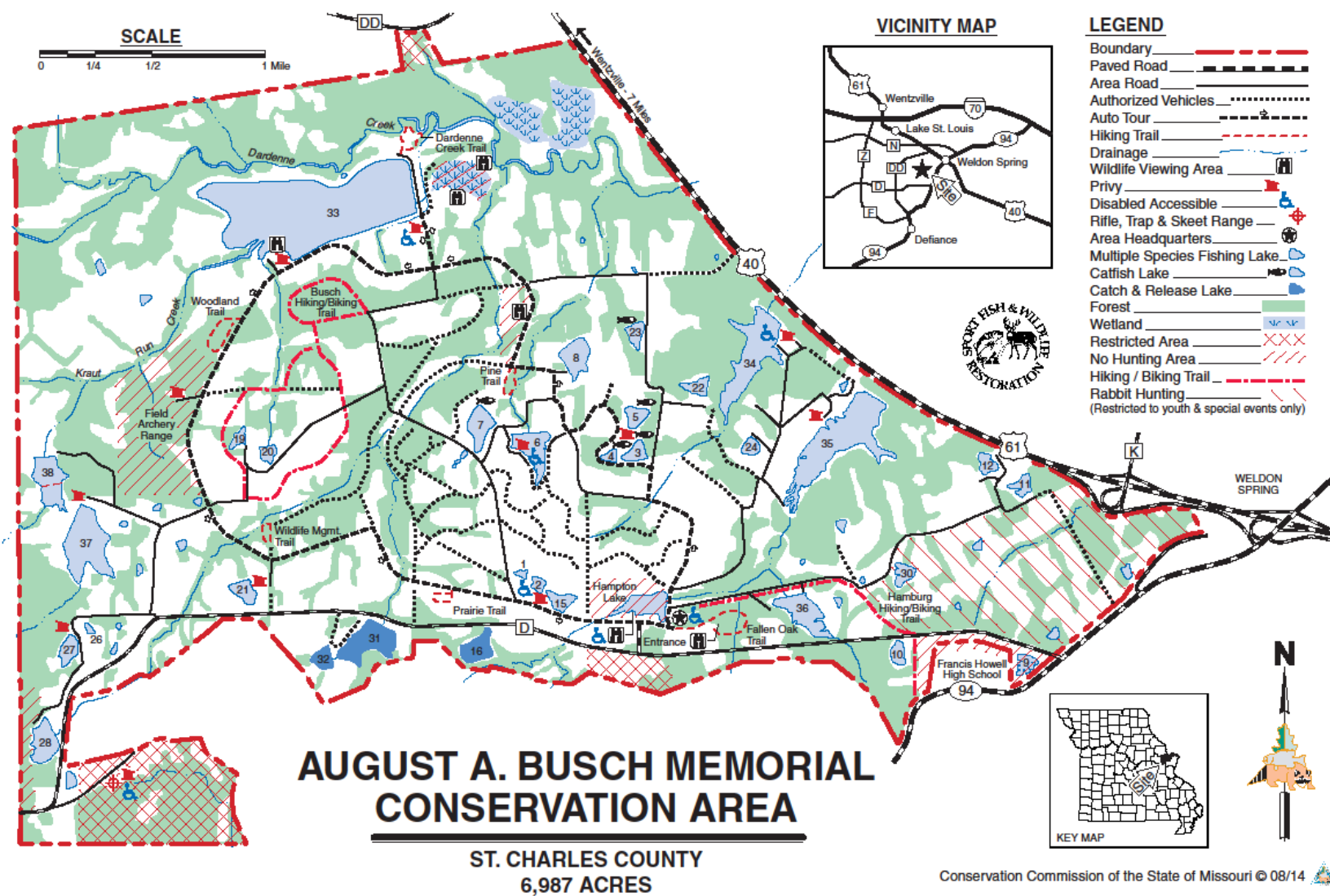


Figure 2: Aerial Map

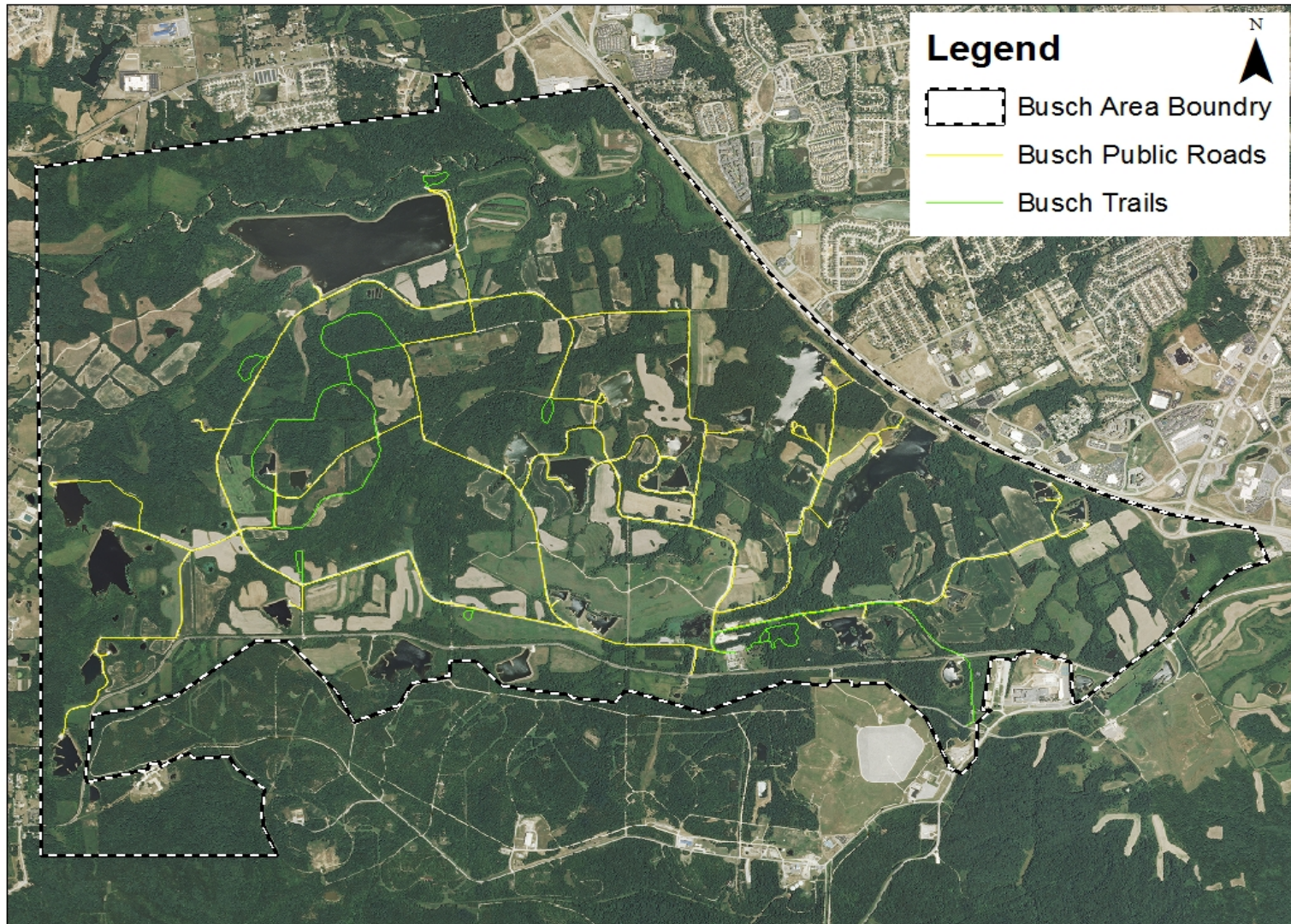


Figure 3: Department of Natural Resources Groundwater Use Restriction



Appendix A: Busch Memorial CA Lakes and Ponds

Lake	Acres	Use	Specialty Fishery	Proposed	Pond	Acres	Use
1	1	ARE/FF		ADA/SA	7a	0.3	MS
2	2	ARE/FF		RE	9A	1.5	MS/FF
3	3	ICF*/FF	PE/WT	SR	9B	0.8	MS/FF
4	2	ICF*/FF	BE	DB/SA	10	0.3	MS
5	3.4	ICF*	PE	ADA/SA/SR	11	0.2	MS/FF
6	18	MS/FF	BE/HSB	RE	16A	0.3	MS/FF
7	12	ICF/FF	BCF/FCF	ADA/SA	23A	0.3	MS
8	15.8	Dog training			23B	0.4	MS
9	3	MS	PE	DA/SR	23C	0.3	MS
10	3.5	MS	BE		26A	0.6	MS/FF
11	4.5	MS/FF	BE	SA	26B	0.8	MS/FF
12	4	ARE/FF		SR	27	0.2	MS
15	4	ARE/FF		ADA/SA	28	2.0	MS/FF
16	8.8	MS/C&R	BE		30	0.3	MS/FF
19	3.2	MS	PE		33A	1.0	MS
20	4.6	MS	PE	RE	33B	1.3	MS
21	5.7	MS/FF	BE/WT	SA/SR	35A	1.0	MS/FF
22	4.1	MS/FF	PE/WT	DA/DB	35B	0.9	MS/FF
23	4	ICF*/FF	BE/WT	SA/SR	36	0.3	MS
24	3.1	MS	BE		37A	0.8	MS/FF
26	1	MS	PE		37B	1.0	MS/FF
27	4.8	MS	PE	ADA/DB/RE	37C	0.6	MS
28	12	MS/FF	BE/HSB/	DB/SR	37D	0.4	MS
30	4.8	MS	PE				
31	19	MS/C&R	PE				
32	6	MS/C&R	BE	DA			
33	182	MS	BE/BCF/				
34	35	MS	BE/HSB				
35	62.5	MS	BE/MU				
36	15.5	MS	BE/HSB	SA			
37	32	MS	PE/HSB	RE			
38	12	MS	BE				
Hampton (Refuge)	12	ARE		RE/ADA			
Total	508.3A					16.3A	

Key					
Uses		Specialty Fishery		Proposed Improvements	
ARE	Aquatic Resource Education	BE	Bass emphasis	ADA	Disabled-angler access
C&R	Catch-and-Release only	BCF	Blue catfish	DA	Dam armoring
FF	Family-Friendly	FCF	Flathead catfish	DB	Dam backslope restoration
		HSB	Hybrid striped bass	RE	Renovation
ICF	Intensive catfish	MU	Muskie	SA	Shoreline improvement/ stabilization/angler access
MS	Multi-species	PE	Panfish emphasis	SR	Spillway restoration
*	Explore phased reduction of intensive catfish management	WT	Winter trout		

Appendix B: Department Responses to Public Comments – August A. Busch Conservation Area Idea Gathering Stage

Background:

Prior to writing the draft August A. Busch Conservation Area 10-Year Area Management Plan, the Department conducted a public input process Oct. 1-31, 2014, as described on Page 18. Altogether, 22 comments were received. The area management planning team took comments into consideration as they drafted the plan. A brief summary of public input themes, including how they will be incorporated or why they will not be included, can be found below. Comments were grouped into general themes and addressed collectively.

Terrestrial Resource Management

Suggests improving habitat for small game (especially quail).

Area staff have been working to improve small game and grassland bird habitat throughout the Busch Memorial CA and recent surveys have shown an increase in quail numbers.

Suggests row cropping more fields for wildlife.

The area is managed for a variety of habitats which includes a mix of agricultural, CRP/idle fields, woodlands, grasslands and wetlands to support many different wildlife species.

Suggests thinning out bushes, trees between Lake 34 and road/parking area.

We will look into removing some of the vegetation.

Suggests increasing wetland habitat.

The new plan includes exploring opportunities for additional wetland habitat across the area.

Aquatic Resource Management

Suggests a lake devoted to larger catfish (with larger size and smaller possession limits).

The intensive catfish lakes (Lakes 3, 4, 5, 7 and 23) receive fish which are contracted to average 14". Larger fish cost much more money, which would mean stocking fewer fish. Busch Memorial CA catfish daily limits are lower than the statewide regulation and dropping the limits further would likely upset anglers. Large (channel and flathead) catfish are available in Lake 33 and efforts are beginning to improve catfish size in Lake 7.

Concern that Lake 34 is becoming overgrown with water lilies.

We are aware of the problem and started to treat some of these plants in 2014. However, the upper end is used by dog retriever training and clubs because of the plants. We'll likely not eradicate all the plants.

Suggests a slot limit for largemouth bass on some lakes.

Good point. We are beginning to discuss management options. This planning effort will likely lead to some sort of regulatory change to improve bass quality in several Busch Memorial CA lakes. Regulation complexity is a great concern for the Department. We try to apply the most beneficial regulations to fish populations, while being sensitive to anglers' needs to understand regulations and our agents' abilities to enforce regulations.

Suggests allowing limit of more than 10 sunfish on some lakes.

Regulation complexity is a great concern for the Department. We try to apply the most beneficial regulations to fish populations, while being sensitive to anglers' needs to understand regulations and our agents' abilities to enforce regulations. We need to be careful about creating too many dissimilar regulations on Busch Memorial CA, which would make enforcement too challenging. In general, sunfish harvest is quite high on Busch Memorial CA. Allowing more sunfish harvest (with a higher daily limit) would likely reduce sunfish fishing quality. Minimum length limits for sunfish have not proven to be very successful and, since most harvest begins after fish reach 6", benefits could be difficult to identify.

Suggests increasing minimum size limit of crappie on some lakes.

In general, over harvest of crappie does not appear to be a large problem at most Busch Memorial CA lakes. Protecting crappie with a size limit may not lead to better crappie fishing. In Lake 33's case, with its overcrowded and slow growing crappie, a length limit would be detrimental.

Suggests expanding well-stocked "kids only" fishing areas.

We are expanding our kids fishing and fishing education opportunities. Lake improvements (at Lakes 1, 2 and 15) will also be included to enhance first-time angler and aquatic education experiences.

Suggests future bank stabilization using Geo-Web or synthetic turf instead of large rocks to prevent injury to dogs.

With the exception of lake/pond dams, smaller substrate is being used to armor jetties and shorelines.

Public Use Management

Field Trials

Concern that area has declined in quality for field trials. Concern that dog trial areas have become overgrown and have erosion issues.

Staff have been working on several projects to improve the conditions of the area for dog training and field trial events. We also continue to work closely with local field trial clubs to address any issues with the conditions of the grounds as they relate to field trials.

Concern that area is not safe for field trials due to car traffic.

Area use continues to increase on the Busch Memorial CA; with this increase, comes additional traffic. The Busch Memorial CA is also surrounded by I-64 on the east, Highway D on the south and Highway DD on the north and west. As the area around the Busch Memorial CA continues to develop, these highways continue to receive more traffic. We realize that these two issues pose safety issues for some field trial events (mounted trials) and has resulted in clubs moving these types of events to less populated areas.

Suggests that area should be dedicated solely to field trials for a portion of the year.

The Busch Memorial CA is one of the most used conservation areas in the state. Area users participate in various activities throughout the year. Since the conservation area is a high public use area, it is important to maintain a balance among the various area users (field trial users, hikers, bird watchers, etc.) without restricting hunting and fishing activities. Also, due to Federal Aid restrictions we are not able to close the area to public access, especially hunting and fishing activities, for other uses.

Suggests that area be promoted and managed as a national destination for field trials.

Use and promotion of field trials on the Busch Memorial CA is handled by the local field trial clubs. However, as we continue to work with clubs on the conditions of the grounds, there likely will be an increased interest in holding larger events, such as national field trials.

Appreciates staff cooperation and recent improvements in field trial areas.

Staff has worked hard to improve conditions for field trials and will continue to work with local clubs to maintain the area in a state that is conducive for field trials.

Suggests consulting with field trial community before changing management of field trial lakes, fields and crops.

The Busch Memorial CA has a long history of holding retriever field trials and working with local clubs who host these events to provide areas that are conducive for training and field trials. Future management plans include working with these groups to seek input on management projects with appropriate clubs to increase access and promote dog training activities across the area.

Suggests developing Lake 8 as a dog training area. Suggests that Lake 8 is currently not upkept as a proper dog training facility. It requires more development.

We have submitted a project proposal to renovate Lake 8 into a lake which will better accommodate dog training activities. Management projects for the area surrounding the lake are also planned and should begin by the end of 2015.

Boats

Suggests allowing non-motorized boats (canoes, kayaks) or small boats with electric motors on lake.

The use of private watercraft on the Busch Memorial CA could create several issues and possible conflicts among area users such as:

- Enforcement challenges including definition of type of watercraft allowed (jon boat, kayak, sail boat, paddle board, etc.) and if the use is related to the Department's mission.
- If we allow private watercraft year-round, we could increase conflicts between shore anglers, rental boat anglers, waterfowl hunters, dog trainers and other groups.
- Increased infrastructure cost and maintenance for larger parking lots and ramp access to the lakes.
- Use of private watercraft would impact the local concessionaire contract.
- Introduction of invasive species (zebra mussels, nuisance aquatic plants, etc.) from private watercraft that are not properly decontaminated.

Suggests requiring a small fee to register and use private boats.

The use of private watercraft on the Busch Memorial CA could create several issues and possible conflicts among area users (stated in previous comment under *Boats*).

Trails

Suggests additional hiking and biking trails.

The area currently allows hiking on several trail miles and two trails, which includes biking miles. Also, the area public roads are open to biking miles and the service roads are open for hiking.

Suggests adding a trail dedicated to motorized off-road vehicles. Charge fee to use this trail.

Extensive all-terrain vehicle use can be harmful to the resources on the Busch Memorial CA and would likely cause erosion issues and decrease water quality in the many area lakes.

Opposes allowing motorized off-road vehicles on area.

There are no plans to begin allowing motorized off-road vehicles on the Busch Memorial CA, especially due to the potential negative impacts to the natural resources.

Suggests developing a multi-use trail network on Busch Memorial CA in the northwest portion of area and offers to help plan, layout, install and maintain these trails. If necessary, close multi-use trail during hunting seasons.

The area north of the Dardenne Creek does not have an access point other than crossing the creek which will likely cause water quality issues. Horseback riding opportunities are offered on other conservation areas throughout the region as well as at various state and county parks.

Roads

Concern that roads are closed and gated on Busch Memorial CA.

Much of the closing of area roads has been due to infrastructure reduction in an attempt to reduce maintenance cost and staff time needed to maintain the extensive road system at the conservation area.

Suggests dust mitigation plan and/or paving at least some of area roads.

Paving additional public roads on the area would be expensive and maintenance cost would likely be higher compared to the current gravel roads.

Suggests building other entrances to the area to reduce traffic and dust.

We are better able to manage access with one public vehicle access. Since the area is gated, another access would require installing another gate. Also, there would likely be issues with constructing a second access along Highway D due to Missouri Department of Transportation restrictions on sight lines.

Concern that visitors don't obey speed limits.

Vehicle speed on the area can be an issue at times and staff work hard to reduce this issue by warning drivers not obeying the speed limits.

Amenities

Concern that building was closed when respondent visited.

The St. Louis Regional Office is open Monday thru Friday from 8 a.m. until 5 p.m. throughout the year. Also, the local concessionaire is open daily from April 1 through Sept. 30 during daylight hours.

Hunting

Suggests allowing fewer deer hunters and fewer managed hunts to allow deer population to rebuild.

Each year we evaluate our managed deer hunts to determine if hunter numbers and harvest limits are appropriate for the current deer population. Deer population estimates are monitored with a variety of survey techniques including aerial surveys and spotlight counts.

Suggests limiting number of dove hunters for safety reasons.

Dove hunting on the Busch Memorial CA does not require a hunter to be drawn for a managed hunt, which allows us to provide increased opportunities for hunters on the area. Other conservation areas within the region conduct managed hunt drawings for hunters that prefer that type of opportunity.

Administrative Considerations

Suggests allowing evening access for astronomers.

The Special Use Permit process allows us to review various activities and grant access for groups to participate in these activities.

Appreciates this area for wildlife photography, hiking, biking, hunting, fishing, field trials and other uses. Appreciates knowledgeable staff.

Staff works hard to provide a variety of public use opportunities on Busch Memorial CA that visitors are able to enjoy. Also, the Department prides itself on the recruitment of high quality staff that are knowledgeable about the resources and users they serve.

**To submit a comment on this document,
click on the following link:**

<http://mdc.mo.gov/node/19221?ap=4901>